REMARKS

Claims 1-18 and 20-30 are pending in the present application. Claims 1-30 were rejected by the Examiner in an Office Action dated 06/06/2003. Applicants have amended Claim 11 (to merely correct typographical errors), and cancelled Claim 19, herewith. Reconsideration of the pending claims is respectfully requested.

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

I. 35 U.S.C. § 112, Second Paragraph

The Examiner rejected Claim 19 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have cancelled such claim herewith, without prejudice or disclaimer, in order to expeditiously place this case in condition for allowance.

II. 35 U.S.C. § 102, Anticipation

The Examiner rejected Claims 1, 11-13, 20 and 30 under 35 U.S.C. § 102 as being anticipated by Saunders (U.S. Patent No. 5,917,497). This rejection is respectfully traversed.

While Applicants' claimed invention and the cited Saunders reference are both generally directed to texture memory, that is where the similarities end. The claimed invention is directed to how to deal with a situation where an attempted allocation of memory failed, whereas the cited Saunders reference is directed to further processing where the attempted allocation of memory was successful. In every instance where Saunders encounters a problem with memory allocation, the process immediately terminates with an error and no further processing occurs for the texture memory or its allocation. In contrast, the claimed invention is directed to recovery techniques responsive to such memory alloca-

texture object in the first memory resource *in response to an inability to allocate sufficient memory to the current texture object*". Instead, in each and every instance of an inability to allocate sufficient memory, the cited Saunders reference immediately terminates processing, stating either 'an error condition will result', 'we can do no more' or 'nothing further can be done'. See, for example, Saunders Col. 5, lines 13-14 (which describes blocks 20 and 22 of Figure 2). As stated therein by Saunders, "If it is determined that sufficient memory could not be allocated 20, an error condition 22 will result". See also, for example, Saunders Col. 5, lines 44-46 (which describes blocks 46 and 48 of Figure 3). As stated therein by Saunders, "Following a test to determine whether contiguous memory was properly allocated 46, if it was determined that there was an error 48, we can do no more". See also, for example, Saunders Col. 6, lines 29-30 (which describes blocks 82 and 84 of Figure 4). As stated therein by Saunders, "If an error occurred in the allocation of memory then nothing further can be done 84". See also, for example, Saunders Col. 6, lines 46-47 (which describes blocks 21 and 23 of Figure 5). As stated therein by Saunders, "If an error occurred in the allocation of memory then nothing further can be done 23". Therefore, since in every single instance of an attempted allocation of memory by Saunders, he discontinues processing by generating an error and stating that nothing further can be done, it is shown that the cited reference does not teach the claimed step of "selectively removing a stored texture object in the first memory resource *in response to an inability to allocate sufficient memory to the current texture object*". Since every element of Claim1 is not taught or disclosed by the cited reference, it is shown that the cited reference does not anticipate Claim 1.

In addition, since Saunders repeatedly states that "nothing further can be done' when a memory allocation fails, it is shown that the claimed invention of Claim 1 is not obvious in view of the cited reference. The fact that a prior art device could be modified so as to produce the claimed device is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As Saunders merely sets a flag and aborts processing

Further with respect to Claim 1, Applicants show that the cited reference does not teach the claimed step of "*responsive to the halting step*, selectively removing stored texture objects in a second memory resource if an inability to allocate sufficient memory to the current texture object is present". The Examiner cites Saunders Col. 5, lines 13-22 as reading on the claimed halting step, which Applicants assume must be the error condition block 22 of Figure 2 as there is no other halting or stopping operation described in this cited passage. It is shown that once this halting error condition occurs, Saunders does not teach or suggest performing any further steps or operations. Thus, there is no teaching of the claimed step of "*responsive to the halting step*, selectively removing stored texture objects". Therefore, Claim 1 is further shown to not be anticipated by the cited reference.

Further with respect to Claim 1, Applicants show that the cited reference does not teach the claimed step of "allocating memory in the second memory resource to the current texture object *in response to selectively removing stored texture objects*". Applicants have shown above that the cited reference does not teach the claimed step of selectively removing stored objects (responsive to the halting step), so since this step is not taught, it similarly follows that there is no teaching of the claimed allocating step which is responsive to this (missing) claimed 'selectively removing' step. The Examiner cites Saunders general teaching of allocating and freeing memory as reading on this claimed step. Applicants show that for a prior art reference to anticipate in terms of 35 U.S.C. 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). A general teaching of allocating memory and freeing memory does not teach or otherwise disclose the specific claimed step of "allocating memory in the second memory resource to the current texture object *in response to selectively removing stored texture objects*", and therefore every element of the claimed invention is not identically shown in the cited reference and thus the cited reference does not anticipate Claim 1.

In conclusion regarding Claim 1, the claimed invention is directed to how to deal

totally different problems that generally pertain to texture memory. Therefore, Claim 1 is shown to not be anticipated by the cited reference.

Applicants traverse the rejection of Claim 11 by showing that the cited reference does not teach the claimed feature of "wherein the texture management system ... removes a stored object within the first memory resource *in response to detecting an inability to allocate memory to a current texture object*", for similar reasons to those given above regarding Claim 1.

Further with respect to Claim 11, Applicants show that the cited reference does not teach the claimed feature of "wherein the texture management system ... calls the memory allocation unit to allocate memory to the current texture object *after the stored texture object is removed*". Since there is no teaching of *removing* a stored texture object (in response to detecting an inability to allocate memory to a current object), there is similarly no teaching of performing some action (in particular, memory allocation to the current texture object) *after removing* such stored texture object. Therefore, Claim 11 is further shown to not be anticipated by the cited reference.

This claimed feature of Claim 11 advantageously provides for improved error recovery processing by removing a stored texture object in response to detecting an inability to allocate memory to a current texture object, calling the memory allocation unit to allocate memory to the current texture object after the stored texture object is removed, and continuing to remove texture objects until sufficient memory is allocated to the current texture object.

Applicants traverse the rejection of Claims 12-13 for similar reasons to those given above regarding Claim 11, of which Claims 12-13 depend upon.

Further with respect to Claim 13, Applicants show that the cited reference does not teach the claimed feature of "wherein the texture management system removes texture objects from the second memory resource if texture objects are absent from the first memory system *and insufficient memory has been allocated to the current memory object*". Nor has the Examiner made any assertion regarding Saunders teaching of this

This claimed feature of Claim 13 advantageously removes texture objects from a secondary memory resource if texture objects are absent from a first memory resource to thereby provide improved error recovery processing by utilizing multiple memory resources as part of such recovery process.

With respect to Claims 20 and 30, Applicants traverse for similar reasons to those given above regarding Claim 1.

Therefore, the rejection of Claims 1, 11-13, 20 and 30 under 35 U.S.C. § 102 has been overcome.

III. 35 U.S.C. § 103, Obviousness

A. The Examiner rejected Claims 8-9 and 27-28 under 35 U.S.C. § 103 as being unpatentable over Saunders (U.S. Patent 5,917,497). This rejection is respectfully traversed.

With respect to Claims 8-9, as there is no teaching of the claimed step of selectively removing a stored texture object (in response to an inability to allocate sufficient memory to the current texture object), per the discussion of Claim 1 above, there is similarly no teaching of suggestion of a further refinement of this (missing) claimed step that is recited in Claims 8-9. In particular, there is no teaching of the claimed features of "wherein the step of selectively removing texture objects comprises selectively removing all stored texture objects in the second memory resource *in response to an inability to allocate sufficient memory to the current texture object*" (Claim 8) or "selectively removing a single stored texture object in the second memory resource *in response to an inability to allocate sufficient memory to the current texture object*" (Claim 9). The fact that a prior art device could be modified so as to produce the claimed device is not a basis for an obviousness rejection unless the prior art suggested the desirability of such a modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). There is simply no suggestion in the cited Saunders reference of any desire of further processing upon encountering a memory allocation error or upon encountering an

Thus, it is shown that Claims 8-9 are not obvious in view of the cited reference, as there is no suggestion of any desire to modify the teachings of Saunders in accordance with the claimed invention in Claims 8-9.

In rejecting Claim 8, the Examiner states (at page 3, paragraph 6 of the most recent office action dated 06/06/2003) that 'although Saunders does not teach the removal of all stored texture objects or a single texture object in the second memory source, as cited above, Saunders does teach *sufficient memory must be first allocated*" (emphasis added by Applicants). This is exactly the point being advocated by Applicants. Saunders teaches that sufficient memory *must* be allocated in order for Saunders operations to continue. If Saunders encounters an error in allocating memory, he terminates processing immediately with an error (Col. 5, lines 13-14, etc.). There is simply no teaching or suggestion of "wherein the step of selectively removing texture objects comprises selectively removing all stored texture objects in the second memory resource *in response to an inability to allocate sufficient memory to the current texture object*" (Claim 8) or "selectively removing a single stored texture object in the second memory resource *in response to an inability to allocate sufficient memory to the current texture object*" (Claim 9), and these claims are thus shown to have been erroneously rejected.

Applicants traverse the rejection of Claims 27-28 for similar reasons to those given above regarding Claims 1, 8 and 9.

B. The Examiner rejected Claims 2, 4-7, 10, 14, 21, 23-26 and 29 under 35 U.S.C. § 103 as being unpatentable over Saunders (U.S. Patent 5,917,497) in view of Gannet (U.S. Patent 5,790,130). This rejection is respectfully traversed for reasons given above regarding Claims 1, 11, 20 and 30.

C. The Examiner rejected Claims 15-18 under 35 U.S.C. § 103 as being unpatentable over Gannet (U.S. Patent 5,790,130) in view of Saunders (U.S. Patent 5,917,497). This rejection is respectfully traversed for reasons given above regarding Claims

6,295,068). This rejection is respectfully traversed for reasons given above regarding Claims 1 and 20.

Therefore, the rejection of Claims 2-10, 14-18 and 21-29 under 35 U.S.C. § 103 has been overcome.

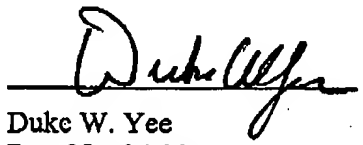
IV. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: 8/26/03

Respectfully submitted,



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